

IN THE CLAIMS:

- 1 1. (Currently Amended) A direct oxidation fuel cell system assembly, comprising:
2 (A) a direct oxidation fuel cell system, having:
3 (i) a direct oxidation fuel cell including a membrane electrode assem-
4 bly having a protonically-conductive, electronically non-
5 conductive membrane with an anode face and an opposing cathode
6 face; and
7 (ii) a fuel source and delivery apparatus that delivers liquid fuel to the
8 anode face of said fuel cell; [[and]]
9 (iii) an oxygen source coupled with said cathode face; and
10 (iv) a gas separator to remove carbon dioxide from the fuel cell; and
11 (B) an enclosure including one or more thin layers of material that are applied
12 to at least a portion of an exterior body of the fuel cell system and which
13 layers conform [[conforming]] substantially to the shape of [[an]] at least a
14 portion of said exterior body of the fuel cell system, said enclosure being
15 substantially comprised of at least one layer of material that is non-
16 reactive to the liquid fuel delivered to said fuel cell.
- 1 2. (Original) The direct oxidation fuel cell system assembly as defined in claim 1
2 wherein said enclosure includes at least one layer of material having color-changing
3 properties that are effective in the presence of liquid to provide a visual indication of a
4 leak.
- 1 3. (Original) The direct oxidation fuel cell system assembly as defined in claim 1
2 wherein at least one layer of said enclosure material is gas permeable, liquid imperme-
3 able.

4 4. (Original) The direct oxidation fuel cell system assembly as defined in claim 1
5 wherein at least one layer of said enclosure material is a plastic film that shrinks to con-
6 form to said fuel cell system upon heating said layer.

1 5. (Original) The direct oxidation fuel cell system assembly as defined in claim 3
2 wherein at least one layer of said enclosure material is gas selective for carbon dioxide to
3 pass therethrough.

1 6. (Original) The direct oxidation fuel cell system assembly as defined in claim 1
2 wherein said enclosure further comprises multiple layers of material wrapping said fuel
3 cell system.

1 7. (Original) The direct oxidation fuel cell system assembly as defined in claim 1
2 wherein said enclosure includes a first layer of material wrapping at least one component
3 of said fuel cell system and a second layer of material wrapping substantially the entirety
4 of said fuel cell system.

1 8. (Original) The direct oxidation fuel cell system assembly as defined in 1 combi-
2 nation with an electronic device to which the fuel cell is providing power, comprising:
3 said direct oxidation fuel cell system being attached to said electronic device by
4 said enclosure material and secured to said device with fasteners.

1 9. (Currently Amended) An enclosed direct oxidation fuel cell, comprising:
2 (A) a direct oxidation fuel cell including a membrane electrode assembly
3 having a protonically-conductive, electronically non-conductive mem-
4 brane with [[and]] an anode face and an opposing cathode face; and
5 (B) an enclosure, including one or more thin layers of material that are applied
6 to at least a portion of an exterior body of the fuel cell and which layers
7 conform [[conforming]] substantially to the shape of [[an]] at least a por-
8 tion of said exterior body of the fuel cell, said enclosure being substan-

9 tially comprised of at least one layer of material that is non-reactive to the
10 liquid fuel delivered to said fuel cell.

1 10. (Original) The enclosed direct oxidation fuel cell as defined in claim 9 wherein at
2 least one layer of said enclosure is comprised substantially of a material that shrinks to
3 conform fit tightly on said fuel cell upon heating.

1 11. (Original) The direct oxidation fuel cell assembly as defined in claim 9 wherein
2 at least one layer of said enclosure material includes color-changing properties that are
3 effective in the presence of liquid to provide a visual indication of a leak.

1 12. (Original) A method of sealing and providing air filtration to a direct oxidation
2 fuel cell system, the method including the steps of:

- 3 (A) identifying at least one component of said fuel cell system that is to be
4 sealed and to receive air filtration;
5 (B) selecting as an enclosure, at least one layer of a material that is non-
6 reactive with a fuel substance used by said fuel cell; and
7 (C) covering substantially the entirety of said component with at least one
8 layer of said material so that said enclosure conforms to an exterior profile
9 of said component.

1 13. (Currently Amended) The method as defined in claim 12 including the further
2 step of selecting said enclosure material from the group consisting of [[Teflon,
3 PVC,]]tetrafluoroethylene, polyvinylchloride and polyolefins.

1 14. (Original) The method as defined in claim 12 including selecting as said enclo-
2 sure at least one layer of a material that is a plastic film that conforms to said fuel cell
3 component upon applying heat thereto.

- 1 15. (Original) The method as defined in claim 12 including covering the substantially
2 the entire fuel cell system in said enclosure material.
- 1 16. (Original) The method as defined in claim 12 including the further steps of:
2 selecting a first material to be applied as a first layer of said enclosure; and
3 selecting a second material to be applied as a second layer of said enclosure.
- 1 17. (Original) The method as defined in claim 16 including the further steps of:
2 selecting one portion of said fuel cell system to be enclosed by said first material;
3 and
4 wrapping substantially the entirety of said fuel cell system in the second layer of
5 said enclosure.
- 1 18. (New) The method as defined in claim 12 including the further step of
2 microperforating said layer of material to allow gases to diffuse between the inte-
3 rior of the fuel cell system and the ambient environment.
- 1 19. (New) The method as defined in claim 12 including the further step of
2 expanding said layer of material to allow gases to diffuse between the interior of
3 the fuel cell system and the ambient environment.
- 1 20. (New) The method as defined in claim 12 including the further step of
2 laser ablating said layer of material to allow gases to diffuse between the interior
3 of the fuel cell system and the ambient environment.